

IUBMB Enzyme Nomenclature

EC 2.3.1.41

Recommended name: 3-oxoacyl-[acyl-carrier-protein] synthase

Reaction: acyl-[acyl-carrier protein] + malonyl-[acyl-carrier protein] = 3-oxoacyl-[acyl-carrier protein] + CO₂ + [acyl-carrier protein]

Other name(s): β -ketoacyl synthetase; β -ketoacyl-ACP synthetase; β -ketoacyl-acyl carrier protein synthetase; β -ketoacyl-[acyl carrier protein] synthase; β -ketoacylsynthase; condensing enzyme; 3-ketoacyl-acyl carrier protein synthase; fatty acid condensing enzyme; acyl-malonyl(acyl-carrier-protein)-condensing enzyme; β -ketoacyl acyl carrier protein synthase

Systematic name: acyl-[acyl-carrier-protein]:malonyl-[acyl-carrier-protein] C'-acyltransferase (decarboxylating)

Links to other databases: [BRENDA](#), [EXPASY](#), [KEGG](#), [WIT](#), CAS registry number: 9077-10-5

References:

1. Alberts, A.W., Majerus, P.W. and Vagelos, P.R. Acetyl-CoA acyl carrier protein transacylase. *Methods Enzymol.* 14 (1969) 50-53.
2. Prescott, D.J. and Vagelos, P.R. Acyl carrier protein. *Adv. Enzymol. Relat. Areas Mol. Biol.* 36 (1972) 269-311. [Medline UI: [73004927](#)]
3. Toomey, R.E. and Wakil, S.J. Studies on the mechanism of fatty acid synthesis. XVI. Preparation and general properties of acyl-malonyl acyl carrier protein-condensing enzyme from *Escherichia coli*. *J. Biol. Chem.* 241 (1966) 1159-1165. [Medline UI: [66132520](#)]

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